THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888

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Obligations and Safeguards Relating to the Production, Issue and Use of Biological Products

DISCUSSION BY THE CENTRAL VETERINARY SOCIETY*

Mr. J. S. R. ABDELA, Barrister-at-Law: He proposed treating the subject from the legal point of view with plain facts of legal interest, with decisions of the Courts which had been built up in the course of time, and with regulations relevant to the profession. He would deal with it under three heads: (1) obligations or safeguards which might arise under the head of criminal law; (2) civil matters arising out of tort; and (3) civil matters which were purely contractual.

On the criminal side they were ruled and regulated more than ever by statute, orders in council, statutory rules and orders, and any breach of or non-compliance with a statute was an offence against the law and was a criminal offence. A mere breach of a regulation was a criminal offence. There were a number of statutes concerning the profession and concerning the use of biological products; some of them referred to chemical products only or medicines but he was not able to define whether they were biological or chemical. What he thought necessary features he had extracted and would bring them to their notice. He had no doubt that they would all know of them in some way or other. Before dealing with individual statutes he emphasized that any non-compliance or other breach no matter how slight was nevertheless a criminal offence.

Food and Drugs Act, 1938.—The Food and Drugs Act regulated the sale of any drug and any drug in that context meant any medicine (not being a proprietary medicine) used for external and internal use. There were various conditions regulating the sale of the drug. It was an offence if such a drug be sold of a nature, substance or quality which was not that demanded by the purchaser. There were a number of defences relating to allegations of improper sale of such a drug or medicine. It would be a defence to say in a case where the substance sold had something abstracted from or added to the particular food or drug that such addition or abstraction had not affected the quality or potency of the drug, nor was it made with any fraudulent intent and that such addition or abstraction was required for commercial production; or in the case of a patent drug that it was issued according to specification; or in the case of a proprietary medicine, that it was supplied in response to a demand for it.

The Pharmacy and Medicines Act, 1941.—This Act did not apply to veterinary surgeons; it was a statute regulating the sale and advertisement of medicines for human use, but did not control sale of patent medicines for animal use. The statute prohibited the advertisements of patent medicines calculated to lead to the treatment of certain human ills; it restricted sales by unauthorized persons but the category of authorized persons included members of their profession. An infringement under that statute was the noted Hall's Wine case where a grocer (an unauthorized person) sold the wine and the label described it as "the leading tonic beverage for giving new life in all run down conditions. A wine glass full is a great help when you are tired or when convalescent after illness and in any case where a tonic is desirable." It was held that such an advertisement was calculated to lead to its use for the treatment of ailments as there was no clear indication it was intended for use as a drink and not as a medicine. They should be careful in putting on labels. The statute was bound to apply to some of the products they sold, manufactured or issued and therefore they should follow the regulations carefully.

Therapeutic Substances Act, 1925.—This Act did not apply because regulation 27 of the Therapeutic Substances Regulations, 1931, excluded from the provisions of the Therapeutic Substances Act any substance intended for veterinary purposes only, provided it was so labelled. It was well to see what the regulations did say as infringements could put them on the wrong side of the law. Under the Act the manufacture for sale of all therapeutic substances must be by licensed persons and it must be made on licensed premises and any imports of substances must conform to statutory standards and must be by a licensed importer. There were regulations under the Act with reference to the name of the substance, with reference to the period to which they could retain the substance before selling it and also regulations concerning the container of the substance. Although any therapeutic substance intended for veterinary purposes only and labelled as such did not come within the provisions of the Act, if, however, there was some question of negligence in manufacture arising after the use of one of those substances, then a Court he felt sure would look at the standards required under the Act and might well treat these as being indicative, at any rate, of what could be regarded as proper standards of manufacture. It would look at the details—manufacture in proper premises, adequate staff, adequate provision for testing, adequate records kept, and a number of other details put in the Act for the purpose of ensuring that the substance would ultimately be proper and fit for the purpose for which it was to be used. A Court would look at the standards under the Act and compare what had been done by the veterinary surgeon to see if he had exercised reasonable care and proper diligence in the manufacture of his product.

Pharmacy and Poisons Act, 1933.—This dealt with poisons enumerated in a schedule and subsequent statutory orders and controlled dealings with poisons. Only certain people were entitled to use the poisons. Members of the veterinary profession in so far as they had a supply of medicines which were or contained poisons were entitled to use and issue them provided they were for the purpose of animal treatment only and provided also that any such poison supply was properly labelled and proper records kept.

Dangerous Drugs Act, 1920-32.—This controlled the manufacture, import, export and distribution of certain habit-forming narcotic substances: (1) raw opium, coca leaves, Indian hemp and its resins; (2) prepared opium for smoking; (3) miscellany of substances including medicinal opium, morphine, cocaine and heroin. Veterinary surgeons were authorized to be in possession of a supply of (1) so far as was necessary for the purposes of their profession, but if they had a supply they must keep adequate records of it. They would see how vital that was when he referred to the penalties. They might also give a prescription for substances under (3) and they had general authority to be in possession of them for professional purposes. Under that Act packages had to be labelled and adequate records kept which must be open to inspection for two years. Substances under (2) hardly came within their province. The penalties under this Act were: on indictment (*i.e.*, generally speaking, when the charge was brought before a Judge of the High Court) they were liable if guilty of an offence to a fine of £1,000 or to penal servitude for ten years, or both. They were heavy penalties. There were lesser penalties on summary conviction in police courts—a fine of £250, imprisonment for twelve months with hard labour, or both. A further penalty of a fine of £50 could be imposed for failure to keep proper books even though such failure was due to mere inadvertence.

To come now to obligations on the civil side. Generally speaking, the civil liability was in tort. A tortious act was a civil injury or wrong arising out of an act of commission or omission of a duty implied by the law owing by one person to another and which gave rise to an action for damages.

In general, a tort consisted of some act done by the defendant whereby he had without just cause or excuse caused some form of harm to the plaintiff. The field of tort was necessarily a very wide one but what they would be concerned with most was the question of negligence. In the case of a person who held himself out to give medical advice or treatment, he implied that he possessed the necessary skill and knowledge to give the advice or treatment and secondly, if he held himself out as such a person he owed a duty of reasonable care: he owed the duty of reasonable care in three ways—a duty of care in deciding whether to undertake a particular case, a duty of care (having decided to undertake that case) in determining what treatment he should give and thirdly, a duty of care in the administration of that treatment. A reasonable degree of skill and knowledge and a reasonable degree of care was merely that degree applicable in the particular circumstances. It could not be said that a man was negligent because someone else having a greater knowledge and greater skill would have prescribed different treatment or operated in a different way. That was not the reasoning, but the test was, what would other members of the profession have done under the circumstances; what would they as reasonable veterinary surgeons of the same grade carrying out that particular case have done? Would they have carried it out in a similar manner (perhaps with one or

* At the meeting held at the Royal Veterinary College, N.W.1, on April 3rd, 1947.

two minor differences). Would they have carried it out as it had been done or, alternatively, would they not have carried it out as it had been done in the circumstances? To prove negligence it would have to be shown that no reasonable diligent and properly qualified veterinary surgeon would have undertaken the task in the circumstances as it had been undertaken on that occasion. It was a difficult thing to prove. The standards demanded were high and a person not fitted to undertake a particular case should not do so. It was the duty of the individual to decide whether or not he was so fitted. The degree of care required varied with the status of the particular practitioner, what was reasonably to be expected in the circumstances being the criterion. They might have unqualified, qualified and specialist practitioners, but the same degree of care was not required of the unqualified as would be demanded by the qualified nor the same degree of the qualified as of the specialist. But an unqualified person holding himself out as possessing skill and knowledge required by a higher grade would be judged by the standards demanded of that higher grade. The individual must exercise every reasonable care in carrying out his undertaking and should apply his skill and knowledge as any other person in the same grade. In an old case (1832) Chief Justice Tindall said that "every person who enters a learned profession undertakes to bring to it the exercise of a reasonable degree of care and skill; he does not undertake, if he is an attorney, that at all events you shall gain your case, nor does a surgeon undertake that he will perform a cure, nor does he undertake to use the highest possible skill. There may be persons who have a higher education and greater advantages than he has but he undertakes to bring a fair, reasonable and competent degree of skill," and in an action against him by the patient the question for the jury was whether the injury complained of must be referred to the want of a proper degree of skill in the defendant or not.

Negligence did not in reality consist of lack of skill but in undertaking the work without the necessary skill. No one was bound by law to be a competent driver of a four-in-hand but anyone who drove a four-in-hand must be a competent and skilful person before he did so, otherwise injury through driving in a reckless or careless manner could lead to a claim in damages. There were safeguards a skilful person could take advice from another of perhaps more experienced qualifications or similar qualifications, and he would be protected if he acted on that advice unless it was a matter of which he himself ought to have known. If he should have known of the circumstances he would be responsible. If a man held himself out as capable of carrying out a certain undertaking and induced the client to rely on his skill and judgment in that undertaking, then if in fact he proved to be incompetent he would be responsible unless he had previously said to the client "Will you undertake the risk of what may occur if I do this?" If the client knowing the risk agreed then he could not subsequently complain if injury resulted. In such a case there might be a claim by a plaintiff against a defendant if the latter acted so recklessly or was so incompetent that, had the client known of this, he would never have consented at all. The duty owed by a professional man could be extended by contract or by an implied undertaking. A higher degree of skill could be imposed by the terms of a contract or could be implied from the circumstances; for example, if a person held himself out to be a specialist in a particular form of treatment and either overrated his skill and embarked on what skilled men might regard as a reckless experiment, then he would be liable. No one was liable for a mere error of judgment. The test was what was reasonable in the circumstances. They should always apply that test, that is to say whether or not a person in the same grade would have acted in a similar manner. If they did not like the circumstances under which an operation was to be performed they were not bound to perform it. If a person did undertake the operation under unfavourable circumstances he was answerable unless he said: "I do this at your request and will not be responsible for the consequences."

Over a long period of time the question of negligence had been the same: there was very little difference from the early 14th century. Medical and surgical treatment of animals came under corporate control at the middle of the 19th century (1844) and prior to that time farriers who shod horses and "repaired" their feet were incorporated by an Ordinance dated 1356 granted by the Mayor and Aldermen of the City of London as Marshals of the City of London. They would find on reading the Ordinance that the same principle of negligence applied then; "no one shall keep a forge until he has been admitted by the Masters of the trade as able and skilled in the trade to the profit of the commonalty of the city and the realm." The 1356 Ordinance dealt with matters of advice, treatment and negligence and subsequently there were a number of cases brought against Marshals for negligence. In 1369 a Marshal was charged with negligently treating a horse and causing its death. In 1441 a Marshal took upon himself the cure of a horse of a certain disease and "so negligently and improvidently imposed medicine" that the horse died.

The third head of liability was contractual. In the case of Dodd and another *v.* Wilson and McWilliam the Judge held four things; that the cattle became sick because there was something wrong with the toxoid with which they had been inoculated; that M. had given no express warranty that the treatment would be harmless even if there was something wrong with the toxoid; that there was an implied condition that the material supplied was reasonably fit for the purpose for which it was required; and that the Sale of Goods Act, 1893, applied between the defendants and the third party and the third and fourth parties. Between those parties, the manufacturers and the suppliers, and the suppliers and the veterinary surgeon, a contract of sale existed and therefore the Sale of Goods Act applied. The judge admitted that the case was a new application of the law but he would not concede that it was new law. It was certainly arguable and there were a number of people who said it was new law. The decision imposed on professional men in carrying out their professional work an obligation far beyond the ordinary duty of exercising proper skill and care.

He would endeavour to explain the section of the Sale of Goods Act and the meaning of the implied terms. The 1893 Act was a public statute and the law endeavoured to give statutory authority to what had been a normal business practice as between merchants when buying and selling goods. Merchants did not always enter into written forms of contract, but whether the contract was oral or in writing it was always understood or was implied that where goods were bought for a certain purpose they should be reasonably fit for that purpose. Therefore, on the passing of the Sale of Goods Act, 1893, that implied warranty was incorporated into the statute, and where goods were sold and the purpose for which they were sold was made known to the seller, and even without anything written to that effect, it would be implied that the goods were reasonably fit for the purpose for which they were required. The implied warranty of fitness therefore existed in all contracts for the sale of goods unless specifically excluded. That was why, so far as the defendants and the third and fourth parties were concerned, that condition was there and the goods should have been reasonably fit for the purpose for which they were required and in fact they were not. So far as the veterinary surgeon and the plaintiff was concerned the question arose "where was the contract?" It was said that the agreement was for the supply of a particular toxoid. That was the point the Judge had to decide and he said in fact "Why should a veterinary surgeon be in a better position than the supplier of the material merely because he injected it; he should be in a similar position; his liability might be increased by an improper method of administration, but otherwise it could not be lessened." Citing an earlier case the learned Judge adopted the dictum that as a general proposition of law, when one man engages with another to supply him with a particular article to be used for a certain purpose, he enters into an implied contract that the article shall be reasonably fit for the purpose for which it is required. Thus the same principle is being made applicable to a contract which is not technically a contract for the sale of goods at all, and similar words are being used. "Therefore," said the Judge, "I cannot see why the veterinary surgeons should be in a better position than the supplier and the same principle of introducing an implied term about the condition of the goods must be applicable to them and they must be responsible to the plaintiffs." That was the basis of his reasoning. It was open to argument as it put the profession in a more precarious position than ever before and added to the responsibility of exercising skill and care the responsibility of the supplier of materials in any contract, if not expressed, then at least implied. Consequently it rendered the practitioner subject to the same implied terms and conditions as were applicable in an ordinary contract of sale under the Sale of Goods Act. There were two lines of cases in the law relating to the sale of goods and the supply of labour and materials. For example, the repairers of a motor car who agreed to do certain work and supply and fit all necessary parts were bound to see that the parts for the car were fit for the job and were responsible even for any latent defects undiscoverable at the time by any reasonable diligent standards. If an accident occurred the repairers were liable to the owner because they did not supply parts for the car which were reasonably fit for the purpose required. On the other hand, the relationship between a professional man and his patient was different; he carried out an operation and his obligation was to exercise reasonable skill and knowledge and the exercise of care. Again, for example, a dentist might be asked to make a set of false teeth; quite apart from any question of whether he thereby entered into a contract for the sale of goods or merely contracted for the supply of labour and materials, his obligation was to make a set of dentures which would fit the mouth and be reasonably fit for the purpose for which they were required. He was therefore responsible if in fact he did not carry out the undertaking in a

proper manner and he was responsible if the dentures were manufactured or prepared in an unsuitable way. There was a difference between that case and one where a chattel or goods had to be delivered. In an ordinary contract for the sale of goods there was an implied warranty of fitness, unless specifically excluded, incorporated in the contract because of section 14 of the Statute; in a contract for work and materials the law recognized a similar implied warranty analogous to that under the Statute. The Judge found as a fact in the Dodds' case that the materials supplied contained unneutralized toxins and therefore they were not fit for the purpose required and accordingly the veterinary surgeons were held responsible for the ensuing damage. What then could the veterinary surgeon do in law to protect himself against any such possible contingency? Firstly, he could say to his client, "You use your own materials." He did not think that was a practical proposition. In any event he was certain that if the client purchased the materials to carry out the operation he would have a look at them and say "Is that good" and the veterinary surgeon would probably reply "Yes." By saying "Is that good" the client was relying on the veterinary surgeon's skill and judgment in the selection of materials and therefore the materials used should be fit for the purpose for which they were required. Secondly, they could supply and use their own materials and expressly contract out of liability. They could exclude all warranties expressed or implied, statutory or otherwise, and endeavour to contract out of the responsibility and obligations as far as possible and even exclude latent defects undiscoverable by the normal exercise of reasonable care, skill and judgment beforehand. In his opinion even that would not close the gap because although they might exclude themselves from liability in the use of materials which were, for example, of an inferior quality and caused no harm, they would not be excluded from liability if they supplied some other totally different kind of material. The veterinary surgeon was in an unenviable position as he handled materials which of their very nature were subject to biological changes and might well become an entirely altered product. In the Dodds' case it was held as a fact that the material was not a toxoid but a toxin and as the veterinary surgeons had not contracted to supply a toxin it would be outside the contract no matter how expressed and therefore in endeavouring to contract out they would have been entirely outside the terms of the contract and would be liable. Finally, there was the question of whether they could close that gap by insurance against risks. If they did insure against risks then the gap would be closed to the extent of securing an indemnity against liability. Insurance in such a matter was very unusual. But results like those in the Dodds' case would be a rare occurrence and as perhaps the premium would be a small one insurance might prove the most prudent course to take.

Mr. W. G. R. Oates (Secretary and Registrar, Royal College of Veterinary Surgeons): In the Dodds *v.* Wilson case he thought something unusual had happened in that new law had been created almost unnoticed. Indeed when he spoke of the circumstances of the case and of the judgment given therein to a person very learned in the law the latter had said "I don't think it can possibly be so." Unfortunately it was so and the Judge had laid down new law which was rather alarming. The position before had been well described, amongst other matters, in a series of articles in *The Veterinary Journal* in 1943. The position then was quite different from the position laid down as a result of the case.

In the Dodds *v.* Wilson case he did not think everyone realized the far-reaching implications of the judgment which, if it was disturbing for the veterinary profession, was also interesting in showing how English Common Law was constantly changing. The implications of the case were realized by the medical profession and the *British Medical Journal* in a leading article on the decision had said that it opened up a serious new legal threat to the medical profession although it concerned a firm of veterinary surgeons. While the new law remained unchallenged a doctor might be called upon to pay heavy damages if the drug he applied caused harm as not being reasonably fit for the purpose for which it was intended. For as the article said: "To shoulder the responsibility of their own mistakes was bad enough but to be responsible for the drug manufacturer was crushing. In view of the possibility of an appeal further comment must be withheld."

Unfortunately there would not be an appeal so the decision at the moment would remain law. What was the result of that? For the present a veterinary surgeon when giving drugs or injections should make a careful note of the firm from which he had obtained the preparation used and the date of supply and batch number as well as a note of the herd or part thereof, or even individual animals, treated with each batch of the preparation, so that in the event of anything occurring he could bring the responsibility back to the firm which supplied him. There was a danger also for the practitioner that even if, by reason of such precautions, liability could be brought back to the suppliers it would be of no avail if the suppliers were "men of straw": thus it was a question of either obtaining drugs from firms whose financial stability was assured or alternatively of being insured in case the supplier could not meet a judgment. As to the possibility of such insurance he did not know what the position was; it might well be a matter of a special policy from Lloyd's.

There now remained the question of what collective action the profession should take. In the case of Dodds *v.* Wilson if there was no appeal, and he understood that there would be none, then the profession had got to face the rather difficult position that the decision remained law until it was reversed either by another case or by an Act of Parliament. An Act of Parliament was extremely difficult to obtain and the only alternative was to hope for or to arrange another case on similar facts and to be prepared to have such case taken to the Court of Appeal in the hope of obtaining a reversal of the decision in Dodds *v.* Wilson.

Summary of General Discussion

Although the code of honour within the profession dictates that no member shall refuse to accept a call for assistance, day or night, he would be within his legal rights to refuse a request if he considered the objective beyond his capabilities.

Discussion subsequently revolved around the position of the veterinary surgeon in the Dodds case and how best the veterinary surgeon could protect himself in the future. How far was the veterinary surgeon negligent, and where did he and others who used biological products stand? The question of negligence by the veterinary surgeon was specifically excluded in the Dodds case, which was fought on a breach of contract basis. Some thought that veterinary products should be included in the Therapeutic Substances Act, and the standards of manufacture, conditions of usage, date of expiry, etc., clearly defined therein. This would still not make the veterinary surgeon absolutely immune. His very training puts him in a position (*a*) to select the preparation likely to be best in the circumstances, and (*b*) to apply it correctly. On either ground he might be ultimately responsible, under (*a*) on an implied warranty if his skill and judgment is relied upon and under (*b*) for negligent application. Any indication given to the farmer of possible risk in usage would be valuable, but the onus could not thus lightly be transferred, as the farmer normally relied on the professional skill of the veterinary surgeon in any circumstances.

Though the Therapeutic Substances Act did not cover veterinary products, the Judge (as he did) was quite at liberty to refer to it to guide him as to what standards of production and usage might be regarded as reasonable, and held that there was no separate contract for sale and inoculation in the particular circumstances. If materials are sold for a particular purpose, there is an implied warranty that the materials are fit for that purpose—this is a general principle of law. The Judge ruled that there was an implied warranty of fitness existing between the parties for work and materials in this case. If in any doubt as to the reliability of the substance, the veterinary surgeon should advise the owner. The situation was, however, quite different if the client specified the use of a certain preparation.

Many minor points were also discussed. Training carried with it responsibility, and a master was responsible for his servant if acting under his instructions, though there were exceptions. He could not be responsible, however, for any directions given to the servant of his client by his client.

The general effect of the Dodds' case is therefore to expose the veterinary surgeon to an added risk in the selection and use of his materials. His training places him in a position to assess the value of a certain preparation for a particular purpose, though he has always to place some reliance on the manufacturers. He may be negligent in his selection and/or its administration.

One speaker recommended that everyone should contribute to the N.V.M.A. Veterinary Defence Fund.

Weekly Wisdom

"*. . . It is doubtful, however, whether the profession of chemistry can be said to have existed before* 1877, *when the Institute of Chemistry was founded, for a profession is created only when those who are engaged in certain specific activities form themselves into an organized body which can prescribe standards of qualification for membership, can examine the qualifications of aspirants to the profession, and can form a register of those who reach the prescribed standards. Such an organization must also embody the aims and ideals of its members, give corporate expression to their views, and represent the profession in the eyes of the community. The founding of the Institute of Chemistry in* 1877 [*which was strengthened by the grant of a Royal Charter in* 1885 *and became the Royal Institute of Chemistry in* 1943] *may be said, therefore, to have created the profession of chemistry in Britain. . . .*"—"British Science News," (1947.) **1** (1). 13.

CLINICAL COMMUNICATIONS

Syncope Following Barium Chloride Intravenously in the Horse ?

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After many years' experience of the use of barium chloride in the horse, given by the intravenous method of Amadon, the writer now records the first death which, in his opinion, resulted from its action.

The subject was a six-year-old Shire mare which had been attended by him some two years previously for scabies of the hind limbs. When he was called to attend her on this occasion, she was reported as having been uneasy for some two hours with, occasionally, a definite spasm of abdominal pain.

The pulse was 60 and of good tone, the temperature 100·5° F. The conjunctiva was fairly healthy and abdominal sounds were somewhat indistinct.

Dung which had been recently voided was coated with mucus and rectal examination revealed a moderately full colon. There was no tenesmus.

Subacute impaction was tentatively diagnosed and barium chloride 7½ gr. in 20 c.c. distilled water was given intravenously but *without the usual deliberate pauses.*

As it was intended to administer mineral oil, preparations were being made to this end, when the mare whinnied loudly and this caused the writer to return to the box, when an alarming picture was presented. The mare had got her head in a corner and was boring into it with every sign of her impending demise. She finally rolled over and after a gasp or two and with some spasmodic movements, died.

During her last spasms there were sounds of eructation and although one could not safely approach too near, there was a very strong odour of turpentine.

It was difficult at the time to judge what caused the actual end, but one instinctively thought of the cardiac embarrassment which is stated by Amadon to be a very real danger. (See *Vet. Rec.*, p. 266, No. 22, Vol. 57, June 2nd, 1945.)

At the *post-mortem* examination, which a sympathetic owner attended, the heart was found to be fatty and flabby, and the small intestine showed a well-marked catarrhal enteritis. There was no visceral rupture and the total amount of ingesta seemed much too small for what a healthy animal should have contained. On the journey home it transpired that the mare had been "dosey" for a week. She had not done as well as had been expected. On this account she had been offered to the owner's father to use for the winter!

Further questioning also elicited the fact that the mare's dung had been covered with mucus for several days.

Here was a case of catarrhal enteritis of a very slow and possibly afebrile type, in which some cardiac degeneration had occurred, aggravated by the use of a patent medicine. The use of barium chloride in such cases is not contra-indicated, but the technique of its use should be qualified by *very deliberate pauses.* An excuse is offered for failure to obtain a fuller history before action was taken. The writer was in a hurry and the case seemed similar to many others in this unusual season, caused by an excess of very short indigestible fibre, imperfect peristalsis and their corollary.

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Suspected Rape Poisoning in Cattle

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Subjects.—Three animals in all were affected; one yearling heifer and two yearling steers from a group of about 30 commercial Shorthorn heifers, steers and dry cows.

History and Symptoms.—The farmer had grown rape for the last three years for cattle grazing purposes, but previously no ill effects had been noticed. This year, since the end of July, the animals had had little else to eat but rape owing to the bareness of the pasture over which they were also running, it having always been the farmer's custom to allow the cattle access to grass at the same time as rape.

The first trouble arose when the heifer was found in a ditch on the evening of September 7th. She was not lying in a position from which she was unable to free herself, and two men were able to turn her round and stand her up quite easily. When seen, she was very dull, her eyes were kept shut and she was then standing quite steadily but would not move of her own accord. Respirations were normal; temperature 100° F., pulse weak and rapid; ruminal movements absent and there was no response to any form of external stimulus. She was given 2 c.c. "Carbachol" twice, at ten-minute intervals, and the owner was advised to get her in for the night if possible. Next day it was learnt that about half an hour after my leaving she livened up considerably and walked the half mile to the farm, where she was put in a loose box.

Next day she appeared much livelier but would not eat or drink; she had passed no dung and appeared quite blind. Once she knocked into the crib and attempted to climb over it and up the wall, but this was the only excitement shown. Temperature and respirations normal, pulse rate steadier and ruminal movements still absent.

At this stage lead poisoning was suspected and mag. sulph.—1 oz. twice daily—was prescribed.

On September 10th she was much livelier and obviously wanted food, but, owing to the blindness, which was still complete, was unable to find it. Since she was found ill she had passed one small lot of dung. On this day ruminal movements were perceptible. During all this time no unusual dilation or constriction of the pupils was observed.

On September 15th she was still blind but was very well in herself. She appeared ravenous for food when given it, but could still not find it herself. A peculiar feature was that, at this visit, it was noticed that there had been very little loss of flesh despite the length of time she had gone without food. When seen on the first day she was very hollow in the flanks but later she had apparently filled out and looked normal.

On September 19th it was learned that two more animals of the same bunch had been taken ill, one on that day and the other four days previously. Neither of these was seen until September 20th, when they were both improving, but the owner described the second as being rather "stupid" and dull and partially blind, while the third seemed quite lively in itself but was somewhat unsteady on its legs and staggery. The second was housed for a few days but not the third, and when they were seen on September 20th they were both improving without treatment, though the third animal to be affected was still slightly staggery.

Diagnosis.—Owing to the second and third outbreaks a poison of some sort was suspected and it was decided to examine blood samples for lead. These were taken from all three animals and sent to Dr. H. H. Green (Weybridge), who could find no signs of lead and suggested that rape might be the cause of the trouble. The pasture was examined at the date of blood sampling (September 20th), when the only plants found that were known to be capable of producing symptoms of poisoning were foxglove, a little of which grew in the ditches, and a very few plants of black nightshade, but there were no signs of the animals having eaten any of these. The rape itself was an exceptionally clean crop, but, in the opinion of the farmer, was of a more purple shade than in previous years. Rape poisoning was diagnosed and no further outbreaks were recorded when the animals were moved to another pasture.

Discussion.—Cote describes symptoms of rape poisoning, and in his paper symptoms as described above were observed and also symptoms of respiratory distress, excitement and red water, which, in this outbreak, did not occur.

Cote finds that rape poisoning occurs in cattle mostly in a wet season, though, of course, this was not the case this year; but, owing to the drought and the sparseness of the neighbouring pasture, the cattle were forced to eat more rape than previously. He did, however, observe that rape was more dangerous when it assumed a purple tint, and this the farmer also noticed of his own accord.

This case is recorded as rape is becoming increasingly popular for cattle feeding purposes. It is, undoubtedly, a most useful crop, but farmers should be warned of its potential danger, particularly when overfed and when it assumes the purple tint.

Acknowledgments.—My thanks are due to Mr. D. W. Menzies and Mr. A. D. Osborne, of the V.I.O. Service at Bristol, for their help and interest shown in the case, and also to Dr. H. H. Green, of Weybridge, for examining the blood samples and giving his advice.

Reference.—Cote. (1944.) *Canad. J. comp. Med.* **8**. 38.

Work on plant tumours has brought to light three factors—virus, hormone and genetic—which may act singly or in combination to produce pathological growth. This trio of aetiological agents is already familiar to students of animal cancer.—R. S. de Ropp (*Nature*).

ABSTRACTS

[The Protective Effect of Arsenic and Derris Dips Against the Sheep Tick *Ixodes ricinus L.* Macleod, J. (1947.) *Ann. Appl. Biol.* **34**. 207-223.]

Macleod describes in this report the results he obtained when using (*a*) As_2O_3, bath strength 0·2 per cent., (*b*) a coal tar-creosote dip, and (c) derris, respectively, in an endeavour to produce an ideal dip for tick control in sheep. Each of these preparations was found to have useful features, which when incorporated in one dip gave very promising results.

As_2O_3, in addition to killing the ticks adhering to the sheep at the time of dipping, gave a protection against reinfection of one to two weeks. This protective effect was increased to three weeks if wool grease was added to the preparation.

The coal tar-creosote preparations were very effective in killing ticks on the sheep at the time of dipping, but gave no protective effect. Derris, when used in a concentration of one part extract to 5,000 in an emulsion, gave a protection of up to 17 days. It had also the power of killing ticks before they were able to engorge.

As a result of the findings of his experiment, Macleod evolved a protective dip, which contained arsenic, derris, cresols and wool grease. This dip was dual purpose in that it produced a rapid kill, and gave up to three weeks' protection from massive reinfestation.

[*Abstractor's Note.*—Such a dip, as described by Macleod, must have proved a marked advance when introduced, but new preparations containing DDT or benzene hexachloride give a greater residual effect on ticks and as effective a kill as either arsenic or derris. In addition, they are practically non-toxic to animals.]

G. C. B.

* * * * *

[Use of Sodium Sulphonamides as Single Injection Specific Treatment in Foot-rot. Forman, C. R., *et al.* (1947.) *J. Amer. vet. med. Ass.* **111**. 208-214.]

The article is a summary of results obtained in 1,500 cases of foot-rot of cattle treated by intravenous injection of sodium sulphapyridine and sodium sulphathiazole in Southern Florida during the last four years. Six clinical types of so-called foot-rot based on the location of the lesions are listed. The first five types are considered to be pure *Actinomyces necrophorus* infections and respond typically to treatment—disappearance of initial swelling and pain, followed by sloughing of the necrotic tissue leaving a clean open wound.

Type 1.—No visible skin lesions; the foot is simply swollen, hot and painful. Recovery within 24 hours of treatment; no tissue slough.

Type 2.—Small necrotic area between the digits which may spread if unchecked, to involve the whole interdigital area and round the coronary band. Responds rapidly to treatment and following tissue slough heals rapidly.

Type 3.—Caused by bruising the digital cushion as it strikes hard rocks while the foot passes down through soft mud. The interdigital area is not involved.

Type 4.—Infected wire cuts, etc. The interdigital area is not involved.

Type 5.—Common in cattle recently transported. The lesions develop in the soft tissue above the coronary band and are due to the animals stepping on each others' feet. Tissue slough may be extensive.

Type 6.—Foot hard and swollen with or without pus pockets. Does not respond promptly to sodium sulphapyridine. May arise as a sequel to former types. The animal is lame and usually emaciated. This type is thought to be due to organisms other than *A. necrophorus*.

Sixty g. of sodium sulphapyridine dissolved in 500 c.c. water administered intravenously to 890 cases led to the recovery of 96 per cent. In only 3 per cent. was any reaction to the injection noted. Such cases showed snapping of the jaws, grinding of the teeth, jerking of the head and tonic spasms of the legs. These symptoms pass off in five to 15 minutes. Sodium sulphathiazole (60 g. intravenously) was used on 261 cases with 65 per cent. recovery. Slightly better results were obtained with a mixture of sulphapyridine and sulphathiazole, but sodium sulphapyridine proved to give the best results.

G. C. B.

REPORT

[Agriculture Overseas. Report No. 6. "Development of the Poultry Industry in North America." H.M. Stationery Office, pp. 61, 10 plates. Price 1s. 6d.]

In the above report, submitted to the Minister of Agriculture and Secretary of State for Scotland, the members of the poultry mission which visited the United States of America and Canada during the winter of 1946 have given a full and detailed account of the poultry industry in the North American Continent. The initial part of the report deals in a general way with all aspects of the poultry industry in the U.S. and Canada while the more important sections of the industry, some of which may be of limited interest to the generality of readers, are dealt with in greater detail under the following seven appendices: Breeding, Management; Disease; Table Poultry Production; Research, Teaching and Advisory Work; Marketing; and Hatcheries.

The report is extremely critical of both our own methods of poultry husbandry and of those in America, and the opportunity has been taken of stressing the difficulties which have accompanied the rapid growth of the industry in North America. The mission's recommendations, based on these observations, are aimed at the prevention of these troubles in an expanding industry here, while there is yet time.

The Mission urge that regulations controlling disease be strengthened, and that more rigorous import restrictions be imposed. Although the report was completed before the commencement of the present fowl pest epidemic, the Mission recommended that the importation of stock (dead or alive) and of hatching eggs from countries where diseases, normally foreign to this country, are known to exist, be prohibited.

The Mission recommended that the principles of progeny testing should be introduced into stock improvement schemes in this country and that the Government should sponsor the preliminary work on the production of in-bred lines for subsequent crossing for commercial use on the lines of "Hybrid Maize."

Other recommendations concern the extension of poultry research work, the early establishment of a research and teaching centre able to provide post-graduate instruction at university level and the provision of field experiments to test the value of the American methods of intensive housing and labour-saving devices. The Mission were greatly impressed with marketing methods in the U.S. and Canada and urge that the industry in this country must improve its marketing and presentation methods of both eggs and table poultry. Stress is placed on the necessity of improved conditions in the Government services for the recruitment of the best type of advisory officer.

The veterinary profession will be particularly interested in the appendices dealing with disease control methods, and with research and teaching, and will be impressed with the marked similarity of the problems on both sides of the Atlantic.

It is unfortunate that an equally lucid and authoritative account of the poultry industry in Great Britain is not available.

The Mission comprised: Dr. R. Coles, National Agricultural Advisory Service; Dr. R. Gordon, Veterinary Laboratory, Weybridge; Dr. A. W. Greenwood, Institute of Animal Genetics, University of Edinburgh, and three well-known poultry farmers, Messrs. C. Hedderwick, J. Sutton and G. Sykes.

NATIONAL CANINE DEFENCE LEAGUE

We have received a communication from the National Canine Defence League inviting the co-operation of our readers in a facility offered to dog owners. This takes the form of the issue to them of a "Lucky Dog" medallion. Finders of injured animals wearing this medallion, which incidentally carries the owner's name and address, are exhorted by an inscription thereon to call a veterinary surgeon. Some members of the public feel that they may have to pay a fee if they obtain veterinary aid for an injured dog whose owner is not present. This has, unfortunately, led to delays while seeking the owner, and dogs have been left too long for effective treatment (or even destroyed by laymen) which might otherwise have been saved.

In guaranteeing, on the owner's behalf, any fee involved, "Canine Defence Lucky Dogs," as the scheme is termed, aims to ensure that veterinary aid is immediately obtained, without absolving the owner of responsibility.

Any reader may obtain a specimen medallion on application to the Secretary of the League, 8, Clifford Street, New Bond Street, London, N.W.1.

Questions and Answers

The submission of questions for inclusion in this column will be welcomed: they can relate to any aspect of veterinary work. For purposes of record, each question is numbered, and those submitting questions are required to furnish (not for publication) name and address.

Answers to readers' queries represent exclusively the personal opinions of the writers, and criticism of the replies will be appreciated.

All communications should be addressed to the Editor.

Canine Distemper Prophylaxis

Q. CCXXVI.—*Information would be welcomed on:—*

(a) *The American method of applying the Laidlaw-Dunkin method of distemper prophylaxis, which appears to consist of* two *injections of vaccine followed by virus* intradermally, *and*

(b) *The "Green" method of distemper prophylaxis, consisting of a* single *injection of ferret passaged virus.*

A.—(*a*) It has never been clear why there exists in America a tendency to use two injections of distemper vaccine before virus is exhibited to establish immunity. Double vaccination was probably suggested in that country because of the difficulty of distributing distemper virus so that it reaches the veterinary surgeon's hands in a viable state. Probably the underlying belief was that two doses of vaccine would leave a better level of immunity than would one, if the virus was non-viable. There is ample evidence that to establish a solid durable immunity the injection of viable virus is essential and that in almost all dogs it can safely be used following a single dose of vaccine. There seems, then, to be no very good reason for increasing the cost of distemper immunization by insisting on the injection of two doses of vaccine.

Intradermal injection of the virus was favoured by some in the earlier field experience in Britain. Its use by this route was, we believe, based on theoretical considerations and when it was shown that just as satisfactory an immunity could be obtained by using the subcutaneous route, the intradermal method was dropped from British practice. The greater tendency to severe reaction at the site of virus injection which did exist in the earlier days of field immunization was one reason why the intradermal route was preferred by some.

(*b*) The writer has attempted to collect information regarding the "Green" method of distemper prophylaxis in countries outside the U.S.A. It appears that certain quantities have been imported into Great Britain by individuals with an American connection and that some commercial importation has occurred in other countries. None of the evidence so far collected favours that method of immunization. It is interesting to note that some of that evidence shows quite clearly that the virus was not viable when it reached Britain. We have been informed that serial passage of several British strains of true distemper virus through a very large number of ferrets has, in no case, caused a modification or adaption which would permit its use in the manner recommended by Green.

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Removal of Round-worms from Kittens

Q. CCXXVII.—*I am often asked for worm pills for kittens. Can you suggest a satisfactory but safe treatment in removing round-worms from kittens,* i.e., *cats under a year old?*

A.—In the experience of the respondent the most satisfactory treatment for round-worm infestation in cats under one year old is the use of tetrachlorethylene, which should be administered in capsule in doses of 0·1 c.c. for each 1 lb. body weight. Kittens under two months old should not be treated. Before administration, the animal should be fasted long enough to empty the stomach before the capsules are given. Oils, fats, cream, milk, etc., should not be given to animals just previous to or just after treatment, and, in fact, no food or water should be allowed until about two hours after the capsule is administered. There is seldom need of a purgative after treatment, but if this is thought desirable magnesium sulphate is most suitable; oleaginous purgatives should be avoided. Re-dosing is seldom necessary, but if circumstances make a second treatment desirable this may be given after an interval of from seven to ten days provided the precautions outlined are again carefully taken.

Since 1942, grants paid by the Ministry of Agriculture and Fisheries under its Premium Bull Scheme have been subject to a maximum initial grant of £60 in the case of a dairy bull, and £40 for a beef bull. The Ministry has now decided to raise the limit of grant payable for beef bulls to the level of that for dairy bulls. The new rate of grant will apply to all bulls bought on and after January 1st, 1948. Subsequent grants payable for beef bulls which remain in service for two or more years will be increased proportionately.

QUESTIONS IN PARLIAMENT

Foreign Feeding-stuffs (Negotiations)

Major Tufton Beamish asked the Minister of Food if he will enumerate the steps that he has taken to acquire feeding-stuffs for British livestock from foreign countries, showing to which countries approaches have been made during the last twelve months, and with what successes; and what prospects there are of an improvement in the supply of feeding-stuffs from abroad in the near future.

Dr. Summerskill: During 1947 we have been in negotiation with 16 countries, including Argentina, Canada, U.S.A., Australia, Russia and Brazil. Negotiations with a number of countries have not yet been completed, and it would be inadvisable at the present time to give further details or to express an opinion on the point raised in the last part of the Question. I am bound to point out, however, that as a result of the poor 1947 harvest supplies of feeding-stuffs are disappointingly small throughout the world.

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Animals (Slaughter)

Mr. Gallacher asked the Minister of Food whether in view of the cases of large-scale slaughtering of sheep, pigs and cattle suitable for breeding, he will impose a ban at all collecting centres on all entries of stock suitable for breeding.

Mr. Strachey: It would not be practicable to impose such a ban. Many female animals are sold for slaughter in the normal course of events and the farmer is the only person who is in a position to decide, in the light of all the relevant factors, whether a particular animal should be slaughtered or should be kept for breeding purposes. My right hon. Friend the Minister of Agriculture has appealed to farmers to retain all suitable animals for breeding purposes.

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Pedigree Livestock Exports

Brigadier Rayner asked the Minister of Agriculture what are the numbers of pedigree cattle, sheep and pigs respectively exported from this country in the past 12 months; and whether he is satisfied that such export is not excessive in relation to our own needs to upgrade livestock.

Mr. T. Williams: The number of pedigree cattle, sheep and pigs exported in the last 12 months is not separately available. Breeding animals, almost all of which were pedigree stock, exported from the United Kingdom between November, 1946, and October, 1947, amounted to 1,443 cattle, 1,274 sheep, and 802 pigs. I am satisfied that these exportations will not unduly diminish our foundation stock, and that the export of first-class breeding animals for this country is an important and justifiable contribution to our export drive.

TOWARDS AN INTERNATIONAL PHARMACOPOEIA

"Considerable progress seems to have been made by the Expert Committee will reach an early agreement on the description and report of the meeting recently held at Geneva indicates the magnitude of the task they have undertaken," observes the *Pharmaceutical Journal* in a recent issue, and continues: "The decision to limit the scope of the international pharmacopoeia, in the first place at least, to those drugs which are considered to be essential in medical practice is a wise one which should help towards speed in the production of the finished work. It is more likely that the Committee will reach an early agreement on the description and standards of essential drugs than on the multitude of drugs of lesser value which continue to be used in spite of advances in chemotherapy and other specific measures. Even with this limitation, the Committee have selected a total of 244 drugs out of 534 submitted for consideration. Large though this number is, it may seem small when compared, for example, with the number of drugs—probably approaching 1,000—dealt with in the Codex, but it is probably a true measure of the extent to which much of our present materia medica could be jettisoned without serious hardship to the patients for whom they are prescribed. Nevertheless, so long as any drug is used it is desirable that its quality and activity should be assured as far as scientific knowledge permits, and for this reason alone it is to be hoped that international agreement on such matters as standards, methods of assay, etc., will be extended beyond the limit of those drugs which are absolutely indispensable."

Royal College of Veterinary Surgeons

Membership Examinations, December, 1947

List of Successful Candidates

London :

First Examination:

Chandler, H. M.	Morgan, T. O.
Christie, E. J.	Sambell, R. A. J.
Hoddinott, R. P. F.	Skilling, P. M.
Hoy, R. J.	Wynne, R. J.
Lucas, E. G.	

Second Examination (*Old Syllabus*):

Ahmad, S. A.	Perrin, Miss P. E. V.
Howard, R. W.	Rawlins, J. A.

Second Examination (*Revised Syllabus*):

Ahmad, A.	Jack, E. J. (A)
Ashford, A. O.	Jackson, B. N.
Bateson, W. B.	Jenkins, P. A.
Beaumont, J. E. (A)	Johnson, Miss A. I.
Beach, J. E.	Jones, D. G. H.
Beckett, R. L.	Jones, D. I. (A)
Blampied, N. le Q.	Jones, I. I. (A)
Bongard, A. L. (A)	Jones, J. E. T.
Bradley, G. E.	Kirkby, W. W. (A)
Burman, Peter	Macdonald, Ian
Corder, John (A)	Mercer, P. H. (A)
Cox, Gordon	Mookerji, A
Croft, Miss P. G. (A)	Morgan, T. L. A. (A)
Davies, D. C. (A)	Newing, C. R.
Davies, J. I.	Overton, Michael (A)
de Gruchy, P. H.	Owen, D. C. (A)
Dwane, J. B.	Paine, G. D. (A)
Evans, G. A. J. C.	Polley, M. J.
Fumpston, W. A.	Price, C. J.
*Garland, J. E.	Ray, B. R. (A)
George, J. K. (A)	Restall, V. R.
Gibson, Miss M. A.	Rosser, I. J. (A)
*Goodwin, R. F. W.	Sherlock, B. C.
Grattan, D. A. P.	Simpson-White, J. N. (A)
Gregory, B. M.	*Smalley, P. R.
*Hall, L. W.	Smith, A. C.
*Hannaford, P. J.	Thomas, W. B.
Harley, P. J. (A)	Threlkeld, J. M. (A)
Harthoorn, A. M.	Tuckett, P. C.
Heath, J. S.	Wadsworth, Frank (A)
Hide, D.	Wheeler, Miss E. C.
Horniman, E. A.	Wiggins, G. S.
Ikin, Peter (A)	Williams, B. M. (A)

* denotes 2nd class honours.
(A) denotes credit in Anatomy (including Histology, etc.).

Third Examination:

Allen, P. V.	Luckin, K. G.
Archard, M. V.	Mack, R. M.
Bainbridge, J. G.	Metivier, H. N.
Batt, P. R.	Pretty, Miss Y. I.
Beresford-Jones, W. P.	Simmonds, D. J.
Butler, G. A. F.	Spalding, V. T. (H)
Caspari, E. L.	Stanislas, Ian
Clifford, H. R.	Sutherland, Miss A. M. B.
Drury, F. S.	Thomas, T. G.
Gilbert, G. A. (H)	Toop, B. R. V.
Harrison, V. A.	Webster, A. A.
Holmes, R. H.	Wootton, J. C.
Honhold, C. D.	Yeats, J. J.

(H) indicates credit in Hygiene.

(*To be continued*).

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Liskeard F.U. discussed the danger of the complete disappearance of farm horses. Mr. W. Rowe said useful horses were being killed in large numbers and soon there would be none available for farm work. The slaughtering of them should be controlled,

NOTES AND NEWS

Diary of Events

Dec. 31st.—Latest date for changes of address to be notified to the Registrar, R.C.V.S., for inclusion in the 1948 Register.

Dec. 31st.—Meeting of the Royal Microscopical Society (Section of Industrial Microscopy) at B.M.A. House, Tavistock Square, London, W.C.1 (Hastings Hall). Mr. F. D. Armitage, F.R.P.S., F.L.S., F.R.M.S.: "Microscopy of Paper," 5.30 for 6 p.m.

Jan. 1st.—Meeting of the Central Division, N.V.M.A., at the Royal Veterinary College, Camden Town, 2 p.m.

Jan. 6th, 7th, 8th and 9th, 1948.—Quarterly and special meetings of Council, R.C.V.S., 10, Red Lion Square, W.C.1.

Jan. 10th.—First Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Southern Region) at the Royal Veterinary College, N.W.1, 11.30 a.m.

Jan. 14th, 15th and 16th, 1948.—Meetings of Committees and Council, N.V.M.A. Committees at 36, Gordon Square, W.C.1, Council (16th) at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2.

Feb. 19th and 20th.—Special meetings of Council, R.C.V.S., 10, Red Lion Square, W.C.1.

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PERSONAL

Births.—Bowen.—On December 6th, 1947, at 47, Arundel Road, Littlehampton, to Joan, wife of P. D. G. Bowen, M.R.C.V.S.—a son, Michael Charles.

Bruce.—On December 8th, 1947, at Cresswell Maternity Home, Dumfries, to Muriel, wife of W. Bruce, B.Sc., M.R.C.V.S.—a daughter.

Needham.—On November 30th, 1947, at Whitehaven Nursing home, Hove, to Beryl, wife of A. J. E. Needham, M.R.C.V.S.—a sister for Valerie.

Tayler.—On December 11th, 1947, to Margaret, *née* Currie, wife of Reginald C. Tayler, M.R.C.V.S., 74, Highfield Lane, Keighley, Yorks—twin sons, Christopher John and Dennis Michael.

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Marriage.—On November 29th, 1947, at St. Andrew's Church, Pembroke Dock, Kenneth John Pitman, M.R.C.V.S., only son of Mr. and Mrs. G. L. Pitman, 20, Manor Road, Manselton, Swansea, to Mary, elder daughter of Mr. and Mrs. D. H. John, 18, Argyle Street, Pembroke Dock.

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R.C.V.S. OBITUARY

Bloye, Percy William, Capt. late R.A.V.C., 44, Ebrington Street, Plymouth. Graduated London, July 11th, 1917. Died at his home, "Sunnyside," Chollacott, Tavistock, Devon, on December 12th, 1947, after three weeks' illness.

Willett, John, M.V.O., M.R.C.V.S., 1, Marylebone Road, N.W.1. Graduated Edinburgh, July 15th, 1896. Died December 16th, 1947; aged 76 years.

Death of Mr. John Willett, M.V.O., M.R.C.V.S.

Our readers will learn with the deepest regret of the death, which took place in the early hours of Tuesday morning, at a nursing home in Hampstead, of Mr. John Willett, M.V.O., M.R.C.V.S., the well-known authority on equine examination and practice, of 1, Marylebone Road, N.W.1. Mr. Willett failed to recover his health following the femoral fracture he sustained at Lloyd's on May 16th, and after a long stay in the Lindo Wing of St. Mary's Hospital, Paddington, he was removed to 26, Thurlow Road, Fitzjohn's Avenue, Hampstead.

A member of Council of the Royal College of Veterinary Surgeons from 1920-37, Mr. Willett was elected President for the year 1936-37, while additional honours accorded him by his colleagues included the Presidency of the Central Veterinary Society and of the Royal Counties Veterinary Medical Association. He was appointed Honorary Veterinary Surgeon to the King on July 16th, 1918, and was created a member of the Royal Victorian Order in January, 1939. We hope to publish a memoir in an early issue.

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Centenary of the Académie Vétérinaire de France

Celebrations in Paris

The official report has recently been received concerning the centenary celebrations of the Académie Vétérinaire de France, which took place on December 19th, 1946. Although its present name

dates back only to 1928, the Academy was founded in 1844. Celebration of the true centenary had to be postponed until after the German forces of occupation had been driven from French soil.

It was a great occasion, that 19th December, celebrated by Frenchmen eminent in the Sciences, Medicine, Surgery, Agriculture, Pharmacy, and in politics; while foreign delegates came from the U.S.A. and from seven countries in Europe; three more being represented by a member each from their Paris embassies. The N.V.M.A. was represented by the then President, Professor W. Mitchell, of Edinburgh, who presented an address on behalf of the Association. Dr. M. Levi, a graduate of Alfort, was present on behalf of the Royal Veterinary College. Bronze medals were awarded, in their absence, to Sir Daniel Cabot, C.V.O., of the Ministry of Agriculture and Fisheries, and Mr. Thomas Dalling, M.A., M.R.C.V.S., F.R.S.E., Professor Leclainche courteously receiving them on their behalf.

The delegates were welcomed by *M.* M. C. Bressou, President of the Academy, who, with just pride, referred to his speech to France as the cradle of veterinary science.

M. H. Magne, a past President, gave an impressive address in which he described the dawn of "modern" veterinary medicine in the 19th century. He paid special tribute to the great Pasteur, of whose death this was the 50th anniversary, adding yet further to the significance of the occasion. Pasteur, who once expressed his regret at not being a veterinary surgeon, was elected to the Academy in 1879. A great figure in the intellectual life of France, and a scientist to whom the whole world remains indebted, he "transformed the veterinary profession, opening up for it a future of immense activity." While Claude Bernard was carrying out his research into the fermentation of alcohol, and laying the foundations of biochemistry, Pasteur was establishing bacteriology, and indeed opening up a vast new field for Medicine.

Among Pasteur's staunchest followers were Bouley and Nocard. Bouley it was who, in 1870, had tried unavailingly to save the cattle, intended as food for the Paris garrison, from foot-and-mouth disease, subsequently having the grim task of supervising the slaughter of 75,000 horses.

M. Magne recalled other great men of the 19th century whose names we have not forgotten: Magne, his own ancestor, and one of the first to study animal husbandry; Calmette and Guérin, of B.C.G. fame; Barron and Sanson; Piétrement, who searched the writings of ancient Greece and Rome, of ancient Egypt and Asia, in order to string together the disjointed stories which, in sum, show the evolution of the horse during 20,000 years and its part in the spread of civilization across the face of the Old World.

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R.C.V.S. CENTRAL LIBRARY FOR ANIMAL DISEASES

Accessions for Quarter Ending August, 1947

PRESENTATIONS

Books

Edleston, R. H.: Some Northern Thoroughbreds, Parts 1 and 2, 1942, 1944.

Moss, A. W., & Kirby, E.: "Animals Were There. A record of the work of the R.S.P.C.A. during the war of 1939-45." Presented "on June 3rd, 1947, to the Royal College of Veterinary Surgeons in recognition of the devoted and heroic work of its Fellows and Members during the war of 1939-45."

Rubarth, S.: An Acute Virus Disease . . . in Dogs. 1947.

The Past Work of Lt.-Col. Watkins-Pitchford. n.d.

A Collection of 20 volumes presented by R. G. Saunders, M.R.C.V.S.

A small collection presented by Dr. E. G. White, F.R.C.V.S., B.SC.

Reports (14); *Calendars and Yearbooks* (3); *Pamphlets and Reprints* (10).

PURCHASES

Fleming, Sir A. (*ed.*): Penicillin: Its Practical Application. London. 1946.

Halnan, E. T., & Garner, F. H.: The Principles and Practice of Feeding Farm Animals. 3rd edition. London. 1946.

Harvey, W. C., & Hill, H.: Milk: Production and Control. 2nd edition. London. 1946.

Hofmann, W.: Die Fortpflanzungsstörungen des Rindes und deren Behebung. Bern. 1945.

Huddleston, I. F.: Brucellosis in Man and Animals. New York. 1943.

Lewis & Co.: Supplement to Catalogue. 1947.

Little, R. B., & Plastridge, W. N.: Bovine Mastitis: A Symposium. New York. 1946.

Pharmaceutical Society: Penicillin: Its Properties, Uses and Preparations. London. 1946.

Summerhays, R. S.: The Book of the Pony. London. 1946.

United States Department of Agriculture: Index Catalogue of Medical and Veterinary Zoology, Parts 1 to 9. Washington. 1932-1946.

COMMONWEALTH AGRICULTURAL BUREAUX

The Executive Council of the Imperial Agricultural Bureaux has decided to change the name of the Bureaux as from January 1st to Commonwealth Agricultural Bureaux. *Nature* intimates that the Bureaux will continue as hitherto in control of the Institute of Entomology, the Mycological Institute, the Bureaux of Soil Science, Animal Health, Animal Nutrition, Plant Breeding and Genetics, Pastures and Field Crops, Horticulture and Plantation Crops, Animal Breeding and Genetics, Agricultural Parasitology (Helminthology), Forestry, Dairy Science, Biological Control and the South American Potato Collection.

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Scheme for the Control of Diseases of Dairy Cattle

STATEMENT SHOWING THE NUMBER OF UNDERTAKINGS NOTIFIED TO THE MINISTRY OF AGRICULTURE DURING THE MONTH ENDED NOVEMBER 30TH, 1947

County	Undertakings Notified		Total Undertakings		
	During Month	Previously	Number	Number of Cattle	
				Cows	Heifers
ENGLAND					
Bedford	—	8	8	145	77
Berks	1	47	48	1,568	1,056
Bucks	—	13	13	390	413
Cambridge	—	—	—	—	—
Cheshire	1	128	129	4,366	1,888
Cornwall	—	—	—	—	—
Cumberland	—	9	9	387	304
Derby	11	195	206	5,868	3,352
Devon	4	110	114	1,629	1,217
Dorset	—	10	10	320	144
Durham	2	158	160	3,429	1,436
Essex	2	94	96	3,343	2,500
Gloucester	—	31	31	1,047	864
Hampshire	—	116	116	4,014	2,595
Hereford	—	5	5	163	137
Hertford	—	22	22	605	450
Hunts	—	—	—	—	—
Isle of Ely	—	—	—	—	—
Isle of Wight	—	—	—	—	—
Kent	—	62	62	1,475	1,041
Lancs	—	76	76	2,326	1,076
Leics	5	58	63	1,552	1,341
Lincs (Holland)	—	—	—	—	—
Lincs (Kesteven)	—	11	11	124	105
Lincs (Lindsey)	—	13	13	388	401
Middlesex	—	1	1	9	13
Norfolk	1	52	53	1,757	1,279
Northants	—	21	21	460	554
Northumberland	1	26	27	888	586
Notts	2	102	104	2,487	1,367
Oxford	—	9	9	228	211
Rutland	—	—	—	—	—
Salop	1	55	56	7,798	1,052
Soke of Peterborough	—	—	—	—	—
Somerset	3	92	95	2,308	1,385
Staffs	—	92	92	2,725	1,848
Suffolk (East)	1	18	19	401	299
Suffolk (West)	3	20	23	485	362
Surrey	—	44	44	1,194	712
Sussex (East)	1	60	61	1,852	1,312
Sussex (West)	—	34	34	1,111	686
Warwick	6	53	59	1,683	920
Westmorland	—	3	3	51	21
Wilts	—	33	33	1,257	801
Worcester	2	77	79	1,538	928
Yorks (E.R.)	—	45	45	748	567
Yorks (N.R.)	3	55	58	1,365	959
Yorks (W.R.)	2	102	104	2,521	1,187
TOTAL, ENGLAND	52	2,160	2,212	66,005	37,446
WALES					
Anglesey	—	10	10	151	109
Brecon	—	5	5	99	68
Caernarvon	—	25	25	461	194
Cardigan	—	28	28	591	401
Carmarthen	4	139	143	2,815	1,540
Denbigh	—	11	11	215	111
Flint	—	21	21	549	229
Glamorgan	—	32	32	490	275
Merioneth	—	—	—	—	—
Monmouth	—	7	7	145	108
Montgomery	—	—	—	—	—
Pembroke	1	7	8	218	235
Radnor	—	1	1	5	1
TOTAL, WALES	5	286	291	5,739	3,271
TOTAL, ENGLAND AND WALES	57	2,446	2,503	71,744	40,717

Notes.—(1) Operative periods of undertakings: 1 year, 613; 2 years, 155; 3 years, 1,735. (2) Undertakings renewed for further periods: 1 year, 26; 2 years, 4; 3 years, 6. (3) Undertakings not renewed at end of operative periods: 89. (4) The figures showing the number of undertakings notified during the month relate to entirely fresh undertakings and do not include undertakings renewed for further periods. Undertakings which have been cancelled or not renewed are not included in the figures for previous notifications.

County	Undertakings Notified		Total Undertakings		
	During Month	Previously	Number	Number of Cattle	
				Cows	Heifers
SCOTLAND					
Aberdeen	—	14	14	814	366
Angus	—	12	12	520	341
Argyll	—	—	—	—	—
Ayr	—	10	10	350	222
Banff	—	1	1	120	20
Berwick	—	1	1	22	7
Bute	—	—	—	—	—
Caithness	—	—	—	—	—
Clackmannan	—	1	1	19	14
Dumfries	—	12	12	617	564
Dunbarton	—	—	—	—	—
East Lothian	—	1	1	20	8
Fife	—	22	22	750	534
Inverness	—	1	1	52	35
Kincardine	—	2	2	60	68
Kinross	—	3	3	60	43
Kirkcudbright	—	5	5	681	624
Lanark	—	4	4	196	110
Midlothian	—	—	—	—	—
Moray	—	—	—	—	—
Nairn	—	—	—	—	—
Orkney	—	—	—	—	—
Peebles	—	—	—	—	—
Perth	—	11	11	304	219
Renfrew	—	3	3	139	98
Ross-shire	—	3	3	130	62
Roxburgh	—	—	—	—	—
Selkirk	—	—	—	—	—
Stirling	—	6	6	198	169
Sutherland	—	4	4	79	38
West Lothian	—	2	2	53	50
Wigtown	—	14	14	1,077	608
Zetland	—	—	—	—	—
TOTAL	—	132	132	6,261	4,200

Notes.—(1) Duration of undertakings: 1 year, 39; 2 years, 4; 3 years, 89. (2) Undertakings renewed for a further period (included in column 2 of statement): 1 year, 129; 2 years, 9; 3 years, 73. (3) Undertakings expired and not renewed (not included in column 2 of statement): 271. (4) The figures in the first column of the statement relate to entirely fresh undertakings.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

SHEEP SCAB:

Derbyshire.—Troitshill Farm, Hope, Sheffield (Dec. 12th).

* * * * *

EARLY SHIPMENTS OF FEEDING-STUFFS FROM RUSSIA

Mr. Harold Wilson, President of the Board of Trade, announced in the House of Commons on Thursday of last week that the trade talks in Moscow had resulted in agreement in principle on the whole range of subjects covered.

The prospective short-term trade agreement with the Soviet Union will bring us increased imports of animal feeding-stuffs which should greatly help the production of meat, milk, bacon, poultry, and eggs. The coarse grains to be shipped to this country will consist of barley, oats, and maize. All that is yet known about the quantity of these shipments is that it will exceed the 500,000 tons of coarse grains offered us by the Soviet Union when the earlier negotiations broke down in July. At that time, too, we were offered 500,000 tons of wheat. In the talks which have just concluded Britain did not ask for wheat, although wheat will be one of the commodities to be discussed next May in connection with the projected long-term trade agreement. At present, for various reasons, the British negotiators preferred feeding-stuffs to wheat and they have been able to obtain more of these than was offered five months ago. A purchase of Russian wheat at present world prices might have had repercussions elsewhere.

The Russians have promised to have coarse grains at the ports ready for shipment when ships arrive, and cargoes should begin to reach this country in January, or in February at the latest. In 1946 our total imports of animal feeding-stuffs from all sources amounted to about 116,000 tons. Total imports in 1938 were 1,903,000 tons.

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B.O.C.M. FIVE-YEAR POULTRY BREEDING CHALLENGE TROPHY

At a luncheon given by the British Oil & Cake Mills at Grosvenor House on Wednesday, November 26th, Mr. R. W. Walker, the well-known R.I.R. pedigree breeder of Chilbrook Poultry Farm, Barnard Gate, near Witney, was awarded the new B.O.C.M. Five-Year Poultry Breeding Challenge Trophy. This cup, to be awarded annually, is for the most consistent breeder at the National Laying Test over a period of five consecutive years.

During the period concerned, 1941-42 to 1945-46, Mr. Walker sent 114 pullets in open competition at the National Laying Trials where his birds averaged 223 scoring eggs and his annual mortality was only 1·5 per cent. During this period Mr. Walker won the *Daily Mail* Gold Cup once. He was also second, and he won the R.I.R. breed section three times.

Mr. W. W. Cooper, the Chairman, after paying due compliments to the recipient, pointed out that the B.O.C.M., through the Veterinary Educational Trust, has recently awarded a veterinary surgeon from New Zealand a £500 Research Fellowship to be held at Cambridge University. Although the researches to be undertaken are concerned with sheep metabolism with the use of radio-active phosphorus, this may play an equally important part in the hens' economy and in this connection the B.O.C.M. hope shortly to be doing research with these radio-active isotopes at the new Unilever Research Station at Sharnbrook, near Bedford.

The profession was represented at the luncheon in the persons of Dr. W. R. Wooldridge, Dr. R. F. Gordon, Professor N. J. Scorgie and Dr. W. P. Blount.

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POULTRY DISEASES: PRECAUTIONS IN NORTHERN IRELAND

Moving the Second Reading of the Diseases of Animals (Poultry) Bill in the Northern Ireland House of Commons last week, the Minister of Agriculture said the primary purpose of the Bill was to give the Ministry the power to deal with any outbreaks of fowl pest disease which may occur in Northern Ireland on the same lines as such outbreaks are dealt with in Great Britain.

Up to November 14th, he said, there had been almost 1,800 outbreaks of fowl pest in Great Britain and it was important that Northern Ireland should have power to deal with the matter if they were unfortunate enough—as they could be in spite of precautions—to get the disease there. The Northern Ireland poultry population at the last census stood at 20,000,000 and it was imperative that no risks should be taken in the matter. He proposed to introduce two small amendments to the Bill—one to extend the definition of poultry to include partridge and pheasants and the other to cover certain other diseases which were not set out in the Bill.

Concluding, the Minister mentioned that the provision of the Bill gives the Ministry power to slaughter diseased or suspected poultry and to pay compensation for any poultry so slaughtered.

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BORAX AS AN INSECTICIDE

"Before the advent of modern synthetic insecticides it was difficult to find any chemical substance toxic to insects which was not dangerous to vertebrates," observes the *British Medical Journal* in its issue of November 22nd, and continues: "Arsenicals and fluorine compounds present certain hazards when used against insects living in association with man or domestic animals. However, borax ($Na_2B_4O_7.10H_2O$) and boric acid (HBO_3) do combine moderate insecticidal activity with low toxicity to mammals. These compounds have been employed in ant baits and as dusts against cockroaches with some effect. But since ants and roaches are difficult to eradicate it would seem advisable to abandon borax for more highly insecticidal materials. Borax and boric acid have been applied successfully to the reduction or prevention of the breeding of fly maggots in manure.[1] Boric acid is more effective than borax, probably because it is more soluble and, weight for weight, contains more boron. The quantities required are 2¼ to 3 lb. (1·1 to 1·35 kg.) of boric acid or 3 to 5 lb. (1·35 to 2·25 kg.) of borax per ton of manure. Farmers may view with caution, however, the possibility of building up a boron excess in the fields, especially with cereals which have low boron requirements.

Another use of boron against fly maggots has been reported recently from Australia.[2] There are a number of blowflies which, apart from the domestic annoyance they cause, are responsible for great losses by "striking" sheep—that is, causing a fatal myiasis. These blowflies can be controlled to a considerable extent by baited traps, but it has been found that the flies breed on the bait in the traps and many maggots escape to renew the natural population. It has been shown that borax added to the baits will prevent breeding in them without destroying their attractiveness.

[1] Midgley, A. R., and Dunklee, D. E., *Univ. Vermont State Agric. Coll. exp. St.*, 1943, Pamphlet No. 5.

[2] Waterhouse, D. F., and Fuller, M. E., *J. Coun. Sci. Ind. Res.*, 1946, **19**, 321.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents should write as briefly as possible and letters should not exceed 350 words.

PRECAUTIONS AGAINST LIGHTNING CONDUCTION BY WATER SYSTEM

Sir,—My attention has been drawn to an article entitled "An Unforeseen Danger of Lightning" by Mr. D. R. Allen, which appeared in your issue dated July 5th, 1947. The article describes the loss of valuable livestock through a lethal voltage being applied to the water system *via* an underground water main. Although the data given are insufficient to indicate exactly what occurred, the sequence of events can at least be surmised. Moreover, the conditions are such that a recurrence of the trouble is not unlikely whenever a thunderstorm occurs in the neighbourhood.

From the fact that the water system was raised to a dangerous voltage it is reasonable to assume that the soil has a high resistivity. That being so the water main is likely to be subjected to similar conditions whenever a lightning stroke occurs to earth or to an earthed object in close proximity to the buried main. Any good conductor such as a water pipe or a metal-sheathed cable, when buried in soil of high resistivity, tends to become the main channel for conducting away the current when lightning strikes the ground in its vicinity. The voltages to which such conductors are raised by this process may be considerable.

It should be noted that, although the underground water pipe could be raised to an appreciable voltage through a fault on the overhead line, the presence of this line is not essential to a reasonable explanation of the observed facts. It is probable that the overhead line played no part in the two recorded incidents, particularly as any fault on this line would be likely to leave visible evidence.

When a water main is buried in ground of high resistivity in a district where lightning storms are prevalent, it is advisable to take precautions against the risk that it may endanger cattle using any water supply connected to it. The necessary precautions can be taken in one of two ways; either the water system which is used by the cattle can be isolated electrically from the underground main, or the ground on which the cattle stand can be raised to approximately the same potential as the water system. The first method may be applied by inserting a non-conducting section in the pipe between the water main and the water system in the building used by the cattle. The alternative method would be to run an earthing strip round the building just below ground and preferably to augment this with a number of similar strips run beneath the floor and to connect these strips to the water pipes. The first method would obviously be much the simpler to apply in the case of an existing building, though the alternative method might have advantages in the case of a new building, particularly if it were relatively small.

Yours faithfully,
H. M. Lacey.

The British Electrical and Allied Industries
Research Association,
5, Wadsworth Road,
Greenford, Middx.
December 10th, 1947.

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WAS IT *PENICILLIUM NOTATUM*?

Sir,—*Apropos* Mr. Thomas Lishman's remarks on the above subject in the issue of *The Veterinary Record* of November 29th, I well remember in 1912 when I set up my "Lab." I struck a period when I was pestered with mould contamination of my staph. *c.* strep. petri culture plates.

This I attributed to faulty technique and clumsy manipulation on my part, but I was struck, as others have been, with the fact there was a halo round the mould where no bacterial growth existed, especially in the staph. plates, and, like them, failed to interpret the underlying meaning. I was "looking in a glass darkly."

The man of destiny arrived in Sir Alexander Fleming: "he came, he saw, he conquered," and gave to the world his epoch-making discovery, for which, and rightly, honours were showered upon him, but as those of us who are privileged to know him are aware, with it all he still walks humbly. Many will say it was a lucky chance this particular mould blew in at his window and contaminated Fleming's culture plate—it was nothing of the sort; there is no such thing as chance; it was destined to arrive at the psychological moment when this master mind would give to the world a master key in the battle against disease. I believe all great discoveries are made by concentration, hard work—Nature is a fickle and jealous jade and permits of no short cuts for the unravelling of her mysteries—and last, but not least, inspiration: and the greatest of these is inspiration.

On this latter score, if I might be forgiven, to mention a very small point.

When the intradermal test was becoming the vogue, with the needle at our disposal the injection was often, with care, intradermal—but sometimes subcutaneous.

For many days I puzzled my brain for a solution and none was forthcoming until one morning I woke up with an inspiration; why not put a shoulder on the needle end so that the true needle point would go so far and no further?

The next step was to find out the average skin measurement; to attain this objective I took some 500 skin measurements and struck an average.

The needle thus devised was practically 100 per cent. accurate, and I remember that when the late Fred. Hobday, who was spending a week-end with me, saw the needle his excitement was great, as was usual with him when anything new in the instrument line was brought to his notice.

Yours faithfully,
W. M. Scott.

Fryern Hall, Bridgwater.
December 1st, 1947.

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UMBILICAL HERNIA IN THE BOVINE

Sir,—The comments on this condition by Professor J. G. Wright, in your issue of December 6th, are of such importance to the profession, and stock-breeding community, that they should not be allowed to pass without notice.

A licence can be refused by the Ministry of Agriculture if the animal is likely to beget defective and inferior progeny, or if it is permanently affected with something that would render the animal unsuitable for breeding purposes, and, of course, if it is permanently affected with any contagious disease.

Very rightly the Ministry of Agriculture would refuse a licence for an animal with either a permanent or temporary disability which would interfere with its ability to serve. Professor Wright assumes that the only rational reason why a licence could be refused for a bull suffering from umbilical hernia would be the belief by the Ministry that such a lesion is an hereditary defect, but, in the absence of such belief, is it not just as rational to grant the licence when the disability having been removed leaves the animal fully capable of service? With this action Professor Wright finds himself in profound disagreement, his reason being, apparently, that the defect would be transmitted to the progeny. Is it not now high time that the whole question of the so-called hereditary diseases of animals be brought up for review?

There is congenital disease, and inherited susceptibility, but one must avoid jumping to conclusions that all diseases, and defects, arising during life time, come from some hereditary predisposition. If human medical science reacted in the same way to human diseases as veterinary science is apparently inclined to react to animal diseases, one would be constantly hearing of such things as someone applying for some Government appointment, in a remote part of the Empire, being rejected by a medical board because his maternal parent had been operated upon for gall-stones (or femoral hernia!), or his paternal parent had had an offending appendix removed! Human life is most certainly progressing in the direction where "growth is more perfect, life more vigorous, disease less prevalent, decay less rapid, and death more remote," but, if the contention of Professor Wright be the correct one, does it not require a good deal of explanation in these days when so many thousands of potential parents are passing through surgical hands leaving behind them tonsils, adenoids, appendices, gall-bladders, semi-lunar cartilages, impacted wisdom teeth, opaque lenses, not to mention the many tumours (benign and malignant) and even whole limbs?

Surely, to be consistent—unless, of course, Professor Wright has some special information on umbilical hernia in the bovine up his sleeve—the surgeons doing the operations just mentioned must be regarded as serving the human race a bad purpose by disguising so many defects among those potential parents who may (as well as the 10 months old bull calf), be very widely used.

Yours faithfully,
Thomas Lishman.

23, Queen's Gate Gardens,
London, S.W.7.
December 15th, 1947.